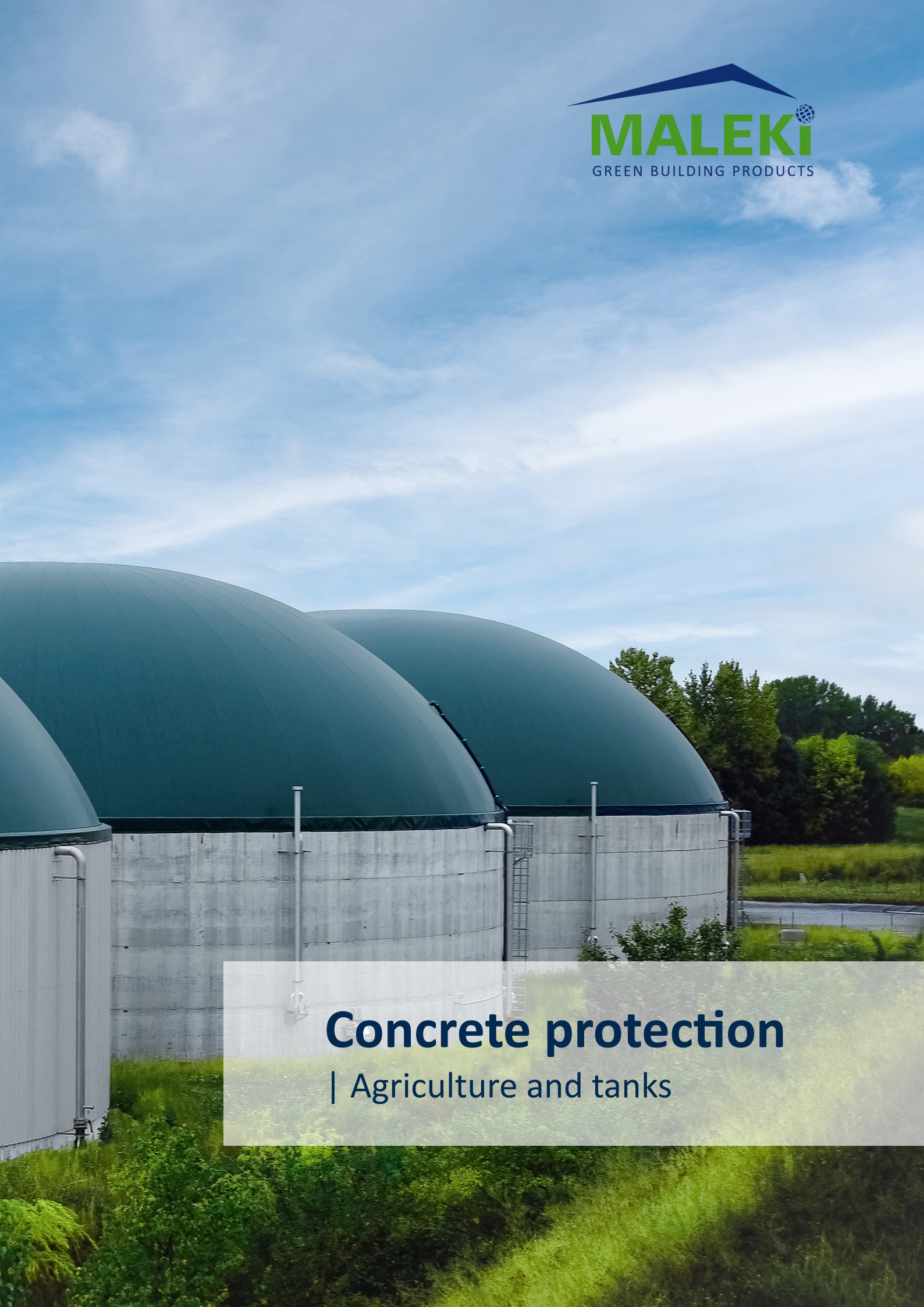
MALEKi
GREEN BUILDING PRODUCTS



Concrete protection

| Agriculture and tanks

Protection against acid corrosion

| Maleki-DW 100 & Maleki-LL 100

Slatted floors, mobile silos or concrete containers contain both strength-giving calcium silicate hydrates and excess of portlandite after the concrete has hardened. While the latter performs important functions in reinforced concrete in terms of corrosion protection of the reinforcement, it is also responsible for undesirable concrete corrosion, acid corrosion and the point of attack for many different corrosive and aggressive media.

The liquid silicates described below convert existing portlandite in the binder matrix into permanently stable calcium silicate hydrates.

When using Maleki-DW 100 and Maleki-LL 100, you do not need any other protective coatings for the general protection of your concrete or cementitious substrate. While other protective systems merely keep pollutants away from potential points of attack such as Portlandite, liquid silicates react with reactive components of the old or new substrate to form a chemically resistant, stable and silicate matrix.

Whether old substrates are subsequently protected or new surfaces are treated from the outset is irrelevant for the application of liquid silicates. With a combined application of Maleki-DW 100 and Maleki-LL 100, cement-bound surfaces are permanently protected. The chemical resistance to aggressive media and harmful weather influences is significantly improved. This increases the service life of the respective surfaces and permanently reduces renovation costs.

Maleki-DW 100 & Maleki-LL 100

| Properties and advantages

Resulting properties

Advantages

- Increases the surface strength
- Significant increase of chemical resistance
- No efflorescence
- Pore sealing, or pore reduction
- No coating
- Reduction of bacterial load or bacterial growth
- Suitable for drinking water, environmentally friendly, no health risk
- Easy application
- Very high active ingredient content

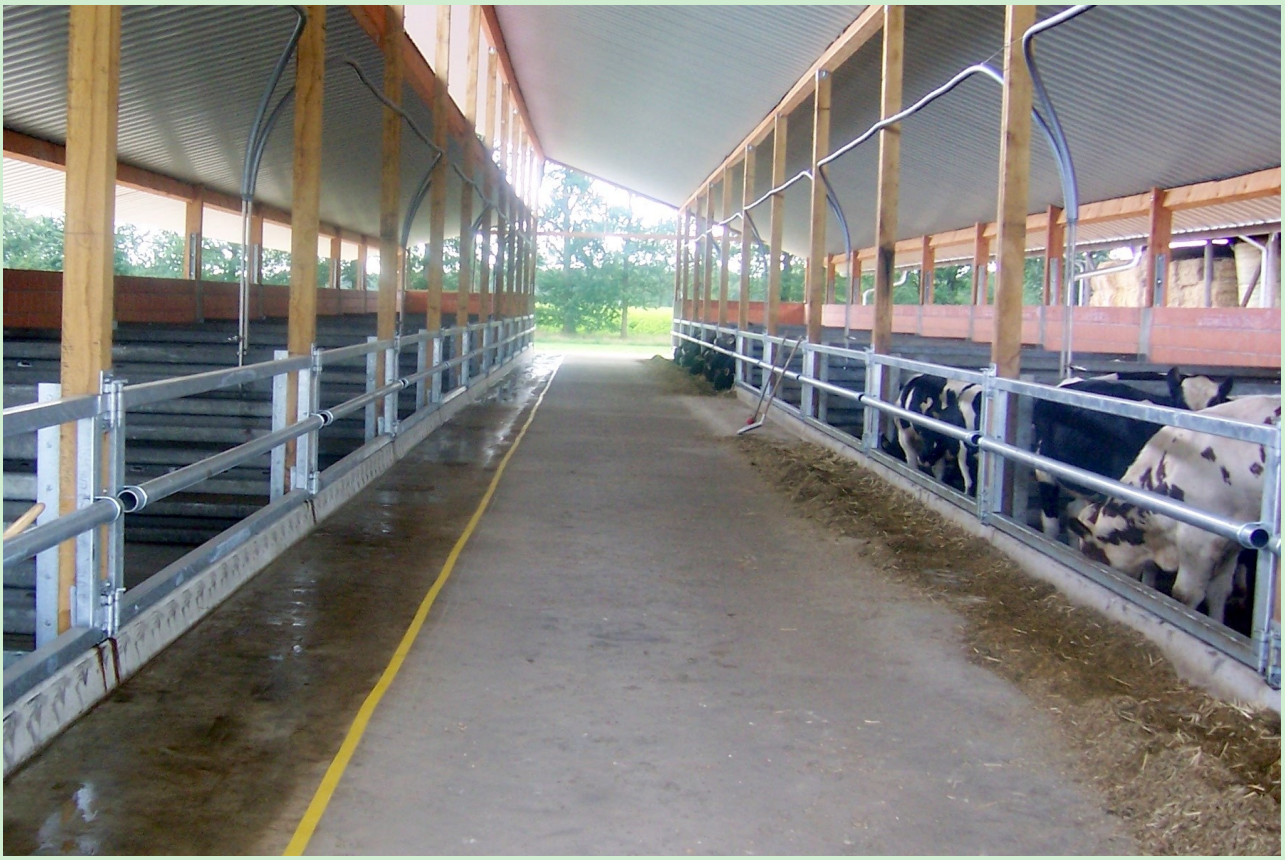
Range of usage

- Areas for automatic feeders
- Feeding tables
- Floors for poultry houses
- Bunker silos
- Tanks e.g. fermenters of biogas plants
- Can be used on both old and new cementitious substrates

Maleki-DW 100 & Maleki-LL 100

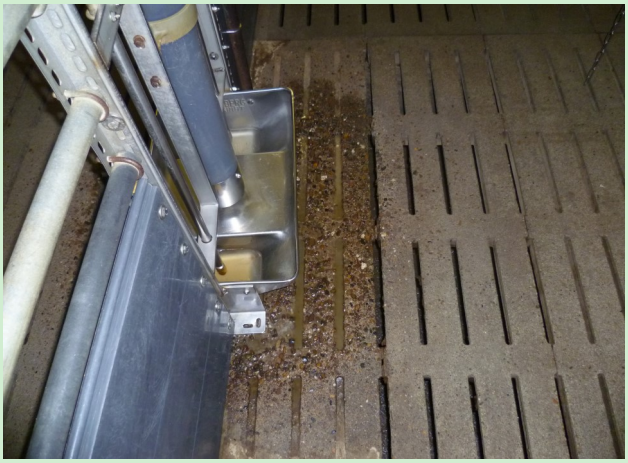
| Tests and references

References

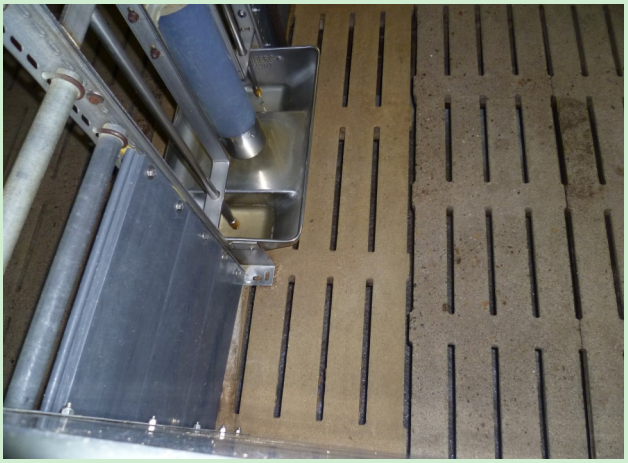


Coating of a feed table with Maleki-DW 100 and Maleki-LL 100 to prevent corrosion damage.

Long-term tests



Acid erosion after 2 years of exposure to feed acids.



Slatted floor treated with Maleki-DW 100 and Maleki-LL 100 after 2 years of feed acid exposure.

Maleki-DW 100 & Maleki-LL 100

| Subsequent protection through impregnation

Application

The substrate must be absorbent, dry and free of dust. The material is to be sprayed undiluted or brushed/rolled extensively in 2 to 3 applications. The application should be repeated until the substrate is saturated. It is recommended to clean the surface to be coated with a high-pressure cleaner before application.

Product properties

Basis	Inorganic
Color	Transparent
Density	1.1 g/cm³
pH-value	11.4
Viskosity	< 100 mPa·s
Consistency	Liquid
Solvents	None

Application-oriented data

Application	Brush / Paint roller / Spraying device
Air and substrate temperature	+5 to 55° C
Consumption Concrete / Screed Self-leveling compounds	Depending on substrate 400 — 800 g per m² 30 — 60 g per m²

Maleki-IFS 500

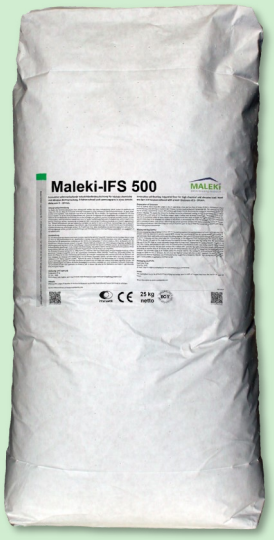
| Special Industrial Floor System

Maleki-IFS 500 was developed as a versatile, heavy-duty industrial floor coating. The material is particularly suitable for high-traffic areas that are exposed to moderate chemical stress. By coating with Maleki-IFS 500, old and new concrete or screed surfaces can be coated quickly and effectively in a layer thickness of 2 — 50 mm.

The finished surfaces can be walked on after just 4 hours and can be loaded after one day.

Outstanding properties

- Mineral
- Not subject to labelling
- Compressive strength: > 50 N/mm²
- Flexural strength: > 10 N/mm²
- High abrasion resistance: Class A12
- High adhesion to the substrate
- Chemical resistance (pH 3 — 14)
- Can be used down to pH 2 with Maleki-DW 100
- Freeze-thaw-resistant
- Waterproof up to 2.5 bar
- Very low emission EMICODE EC 1^{PLUS}



Further properties

- High flowability
- Easy application
- Also processible by machine
- Fast-curing and low tension
- Environmentally friendly

GEV-EMICODE® EC 1 PLUS very low emission

Maleki-SWP 270

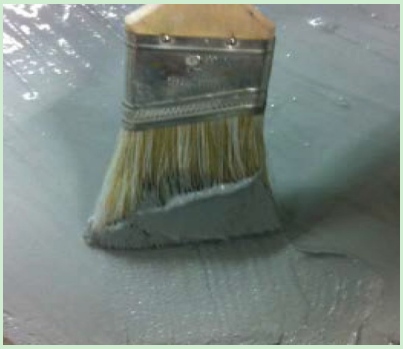
| Silicate waterproofing

Maleki-SWP 270 is a silicate waterproofing slurry with special chemical resistance. Adapted to sulphate loads, it is particularly suitable for waste water installations and biogas plants. Maleki-SWP 270 can even be applied to damp substrates. Water load is already possible after 2 days, acid load after 7 days. For an earlier combined exposure to water and acid, Maleki-SWP 270 can optionally be sealed with Maleki-VS 930.

Outstanding properties

- Resistant against acids and alkalines (pH 0 — 14)
- High resistance against sulphate
- High adhesion to the substrate
- Applicable on damp surfaces
- Silicate technology
- Mineral
- Environmentally friendly

Maleki-SWP 270 after mixing with water before maturing.



Application with a brush.

Further properties

- Ecological alternative for epoxy products
- 1.5 bar water impermeability
- No efflorescence
- Protection against carbonation
- Water vapor permeable
- Crack-free curing
- VOC– and APEO-free
- Easy and fast application

Test certificates

- Acid resistance
- Suitability for drinking water

Maleki-SWP 270 on concrete to protect against corrosive attack by silage.

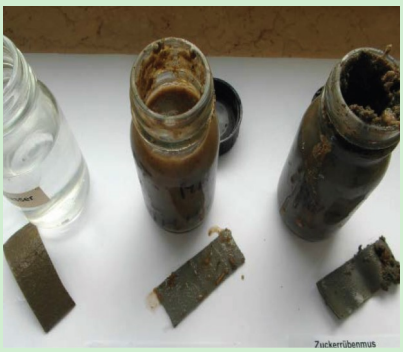
Maleki-DS 250 Flex

| Flexible two-component waterproofing

Maleki-DS 250 Flex is a highly flexible waterproofing, which is based on a new and unique binder system with high chemical resistance. Adjusted to sulphate loads and organic acids, the material is particularly suited for waste water, liquid manure and silage installations. Re-working is possible after a few hours.

Outstanding properties

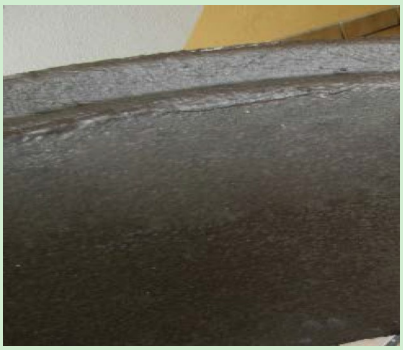
- High resistance against chemical load
- High resistance against sulphate
- Flexible and crack-bridging to at least 1.3 mm
- High adhesion to the substrate
- 2 bar water impermeability
- Can be reworked after 6 hours
- VOC– and APEO-free



Test result: No corrosion due to sugar beet silage

Further properties

- Ecological alternative for epoxy products
- No efflorescence
- Protection against carbonation
- Crack-free curing
- Environmentally friendly
- Short drying and curing times



Coating of a tank for silage storage.

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